# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---|---|---|---|---|
| 10/765,852 | 01/29/2004 | Michael Roydon Puzey | 6502-1031 | 2620 |

466 7590 10/07/2005

YOUNG & THOMPSON
745 SOUTH 23RD STREET
2ND FLOOR
ARLINGTON, VA 22202

| EXAMINER | |
|---|---|
| BOTTORFF, CHRISTOPHER | |
| ART UNIT | PAPER NUMBER |
| 3618 | |

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 10/765,852 | PUZEY, MICHAEL ROYDON | |
| | Examiner | Art Unit | |
| | Christopher Bottorff | 3618 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *29 January 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-15* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☒ Claim(s) *15* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *29 January 2004* is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 3, 5, and 8 are rejected under 35 U.S.C. 102(b) as being anticipated by Darnell US 2002/0109323.

Darnell discloses a vehicle that includes a chassis integral with footboard 2 and at least first and second ground-engaging wheels. See Figure 3. A support 1, 4, 11, 12 is mounted to the chassis for pivotal movement, relatively to the chassis to a limited extent. See Figures 2, 4, and 5. The first wheel 13 includes a first axle 1A whereby the first wheel 13 is rotatably mounted to the support. See Figure 4. A first shock-absorbing structure 3 is provided having a first mounting point at 3A, at which the first shock-absorbing structure is secured to the support, and a second mounting point at 71. See Figure 4. A lever mechanism 7 is provided having a first attachment point at 73, at which the mechanism is pivotally secured to the chassis through the turning of the threads of hole 74 about the threads of pin 73, and a second attachment point at 71, at

which the mechanism is pivotally connected to the second mounting point. See Figure 4-A. At least one link 5 is connected at a first connection point at 71 to the lever mechanism and at a second connection point at 42 to the support. See Figures 2 and 4.

The first mounting point at 3A is closer to the first axle 1A than the second mounting point at 71. See Figure 4. When the chassis is moved downwardly relatively to the first wheel 13, the second mounting point at 71 is moved towards the first mounting point at 3A against a damping force which is generated by the first shock-absorbing structure 3 in order to counteract the tendency of the points to move apart under the downward motion of the chassis. Also, at least a greater part of the first shock-absorbing structure 3 is below the footboard 2. See Figure 4.

Claims 1, 4, and 5 are rejected under 35 U.S.C. 102(e) as being anticipated by Hso US 6,877,591.

Hso discloses a vehicle, in the form of a bicycle, which includes a chassis 2 and at least first and second ground-engaging wheels. See Figure 1 and column 1, lines 7-13. A support, depicted as the lowermost link in Figure 1, is mounted to the chassis 2 for pivotal movement, relatively to the chassis 2 to a limited extent. The first wheel, provided at the rear of the bicycle, includes a first axle whereby the first wheel is rotatably mounted to the support. A first shock-absorbing structure 6 is provided having a first mounting point at 61, at which the first shock-absorbing structure 6 is secured to the chassis 2, and a second mounting point at 16. See Figure 1. A lever mechanism 1

is provided having a first attachment point at 21, at which the mechanism is pivotally secured to the chassis 2, and a second attachment point at 16, at which the mechanism is pivotally connected to the second mounting point. See Figure 1. At least one link 3 is connected at a first connection point, depicted above disc 16 in Figure 1, to the lever mechanism 1 and at a second connection point to the support. See Figure 1.

The spacing between the first connection point and the second attachment point at 16 is less than the spacing between the first connection point and the first attachment point at 21. See Figure 1. Also, when the chassis 2 is moved downwardly relatively to the first wheel, the second mounting point at 16 is moved towards the first mounting point at 61 against a damping force which is generated by the first shock-absorbing structure 6. See Figure 1.

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Darnell US 2002/0109323 in view of Cheng US 5,590,869.

Darnell does not explicitly disclose that the first shock absorbing structure includes a first hydraulic damper and a first coil spring, with a device for exerting a compressive force of variable magnitude on the first coil spring. However, Cheng

discloses the desirability of providing a shock absorbing structure with a hydraulic damper 10, 40, 41 and a coil spring 50, with a device 12 for exerting a compressive force of variable magnitude on the coil spring. See Figure 2. From the teachings of Cheng, providing the first shock absorbing structure of Darnell with a first hydraulic damper and a first coil spring, including a device for exerting a compressive force of variable magnitude on the first coil spring, would have been obvious to one of ordinary skill in the art at the time the invention was made. This would utilize a structure that improves rider comfort on a vehicle.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hso US 6,877,591 in view of Enjo et al. US 4,591,017.

Hso does not disclose that the first wheel is driven by means of a prime mover which is mounted to the support and which is pivotally movable, relatively to the chassis, together with the support. However, Enjo et al. teach the desirability of driving a vehicle wheel by means of a prime mover 28 which is mounted to a support 18 and which is pivotally movable, relatively to a chassis 2. See Figures 1 and 5. From the teachings of Enjo et al., driving the first wheel of Hso by means of a prime mover which is mounted to the support and which is pivotally movable, relatively to the chassis, together with the support would have been obvious to one of ordinary skill in the art at the time the invention was made. This would reduce the effort required by the rider to propel the vehicle.

Claims 6 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hso US 6,877,591 in view of Cheng US 5,590,869.

Hso does not explicitly disclose that the first shock absorbing structure includes a first hydraulic damper and a first coil spring, with a device for exerting a compressive force of variable magnitude on the first coil spring. However, Cheng discloses the desirability of providing a shock absorbing structure with a hydraulic damper 10, 40, 41 and a coil spring 50, with a device 12 for exerting a compressive force of variable magnitude on the coil spring 50. See Figure 2. From the teachings of Cheng, providing the first shock absorbing structure of Hso with a first hydraulic damper and a first coil spring, including a device for exerting a compressive force of variable magnitude on the first coil spring, would have been obvious to one of ordinary skill in the art at the time the invention was made. This would utilize a structure that improves rider comfort on the vehicle.

Claims 9-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hso US 6,877,591 in view of Hals US 6,910,702.

Hso does not disclose the second wheel suspension arrangement defined in claims 9-13. However, Hals teaches the desirability of providing a second wheel 100 of a vehicle with such an arrangement. See Figures 1 and 5.

The arrangement of Hals includes a steering column 109, 105 that is mounted for pivotal movement, about an upwardly extending axis, relatively to the chassis. A linkage mechanism 101, 102 connects a fork assembly 103, 107 to the steering column

and allows reciprocating movement of the fork assembly relatively to the steering column. The second wheel 100 includes a second axle whereby the second wheel 100 is rotatably mounted to the fork assembly 103, 107. A second shock-absorbing structure 112 is mounted to dampen reciprocating movement of the assembly relatively to the steering column.

The linkage mechanism includes an upper link 101, which is pivotally connected to the steering column 105, 109 and the fork assembly 103, 107, and a lower link 102, which is pivotally connected to the steering column 105, 109 and to the fork assembly 103, 107. The second shock-absorbing structure 112 has a first fixing point whereby the second shock-absorbing structure is secured to one of the links 101, 102 and a second fixing point whereby the second shock-absorbing structure is secured to the fork assembly 103, 107. See column 12, lines 34-41. The first fixing point is secured to the lower link 102 and is spaced from a pivot point at which the lower link 102 is connected to the fork assembly 103, 107. See column 12, lines 34-41, and Figure 5.

From the teachings of Hals, providing the second wheel of Hso with the second wheel suspension arrangement defined in claims 9-13 would have been obvious to one of ordinary skill in the art at the time the invention was made. This would further improve rider comfort on the vehicle

Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hso US 6,877,591 in view of Hals US 6,910,702 as applied to claim 9 above, and further in view of Cheng US 5,590,869.

Hso, as modified by Hals, does not provide the second shock-absorbing structure with a second hydraulic damper and a second coil spring. However, Cheng discloses the desirability of providing a shock absorbing structure with a hydraulic damper 10, 40, 41 and a coil spring 50. See Figure 2. From the teachings of Cheng, providing the second shock absorbing structure of Hso, as modified by Hals, with a second hydraulic damper and a second coil spring would have been obvious to one of ordinary skill in the art at the time the invention was made. This would utilize a structure that improves rider comfort on the vehicle.

### *Allowable Subject Matter*

Claim 15 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Claim 15 requires the vehicle to have a pivotally movable base assembly in combination with the first wheel suspension arrangement of claim 1 and the second wheel suspension arrangement of clam 9. The prior art does not disclose, teach or suggest this combination of features.

### *Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kohyama, Trema, Kramer-Massow, Holt et al., Chen, Yih, Felsl et al., Cheng US 6,830,255, Chamberlain et al., and Carrol disclose vehicle rear wheel suspensions. Elliotte, Claudio, Bigot, and Doveri EP 0 621 171 A1 disclose vehicle front

wheel suspensions. Powell, McGreen, Mao, and Lin disclose vehicle folding base arrangements.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Christopher Bottorff whose telephone number is (571) 272-6692. The examiner can normally be reached on Mon.-Fri. 7:30 a.m. - 4:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Christopher Bottorff